

AMENDMENTS TO THE CLAIMS

This listing of claims replaces all prior versions, and listings, of claims in the application:

1-20. (cancelled)

21. (currently amended) A device for directing thermal energy to a target area of human skin, comprising:

~~an energy source that emits energy~~ a supply of electrical power;

~~an electric heater configured to transform the electrical power into a pulse of thermal energy, wherein the electric heater is configured to provide an energy output of less than 5 watts;~~

~~an intermediate substance comprising a solid layer of thermally conductive material defining an external surface adapted to be placed against a target area of the skin, wherein the intermediate substance is configured to transmit thermal energy from the electric heater to the external surface, wherein the intermediate substance comprises a layer of rigid material block the emitted energy so as to prevent any emitted energy from directly striking the target area of the skin; and~~

~~wherein the device is configured to provide thermal energy to the external surface in an amount sufficient to cause pores within the target area of the skin to expand, and is further configured to transmit thermal energy from the electric heater to the external surface in less than 0.5 seconds—an absorbing material embedded in the intermediate substance that is configured to absorb the emitted energy, to convert the emitted energy into thermal energy, to prevent any emitted energy from reaching the target area of the skin without being absorbed by the intermediate substance and converted into thermal energy, and to thereby provide heat which passes through the solid layer to the target area in an amount sufficient to modify the skin tissue by causing pores in the target area to expand without removing skin tissue from the target area; ——— wherein the solid layer is a different material from the absorbing material, and the solid layer is configured to prevent the absorbing material from contacting the target area of the skin.~~

22. (currently amended) The device of claim 21 wherein the intermediate substance comprises a suspension containing high absorbing particles.

23. (previously presented) The device of claim 21 wherein the intermediate substance comprises a thin film containing high absorbing particles.

24. (cancelled)

25. (currently amended) The device of claim 21 wherein the intermediate substance comprises a paper ~~containing a highly absorbing substance.~~

26-32. (cancelled)

33. (currently amended) The device of claim 21 wherein the intermediate substance comprises a thermal insulator ~~containing highly absorbing particles.~~

34. (currently amended) The device of claim 21 wherein the device is configured to prevent any energy from the device except for thermal energy from contacting the target area of the skin ~~intermediate substance comprises a layer of thermal conductor containing highly absorbing particles.~~

35. (currently amended) The device of claim 21 wherein the ~~intermediate substance~~ external surface comprises a metallic layer ~~containing highly absorbing particles.~~

36-44. (cancelled)

45. (currently amended) The device of claim 21 further comprising a heat removing mechanism adapted to remove heat from the targeted area of skin.

46-54. (cancelled)

55. (currently amended) A device for treatment of a ~~target area of~~ human skin, the device comprising:

a power source providing electric current;

a handpiece, ~~the handpiece comprising~~;

an electric heater ~~an energy source~~ that emits thermal energy responsive to electric current;

an intermediate substance on a first end of the handpiece of the device, the intermediate substance ~~configured to contact the target area of skin, the intermediate substance comprising a solid layer of rigid material, the intermediate substance comprising an external surface having a first side adapted to be placed against [[the]] a target area of skin;~~

wherein the electric heater is embedded in the intermediate substance, the intermediate substance ~~is configured to transmit thermal energy from the electric heater to the external surface comprising an absorbing material embedded in the intermediate substance that absorbs at least a portion of the energy emitted by the energy source, wherein the intermediate substance is configured to block and/or absorb emitted energy directed at the intermediate material from the energy source, and the intermediate material prevents exposure of the skin to any energy emitted from the energy source other than thermal energy, and wherein the solid layer is formed from a different material from the absorbing material, and the solid layer is configured to prevent any contact between the absorbing material and the skin; and~~

wherein the intermediate substance is configured to convert at least a portion of the energy emitted by the energy source into thermal energy, and the intermediate substance is configured to transmit at least a portion of the thermal energy and to the target area of skin when the intermediate substance external surface is placed against the target area of skin, wherein the thermal energy transmitted to the target area of skin is sufficient to cause skin pores in the target area to expand.

56. (cancelled)

57. (previously presented) The device of claim 21 wherein the intermediate substance is positioned within a cap, wherein the cap is replaceably attached to a main body of the device.

58. (previously presented) The device of claim 57, wherein the cap comprises a generally cylindrical shape having a circumferential external surface comprising an insulating material.

59. (cancelled)

60. (cancelled)

61. (previously presented) The device of claim 55, wherein the output of the energy source is less than about 5 W.

62. (cancelled)

63. (currently amended) The device of claim 55, further comprising an element configured to remove energy from the ~~absorbing material~~ intermediate substance.

64. (currently amended) The device of claim [[56]] 55, wherein the intermediate substance is positioned within a cap, wherein the cap is replaceably attached to the handpiece.

65. (cancelled)

66. (cancelled)

67. (cancelled)

68. (cancelled)

69. (currently amended) The device of claim 55, wherein the ~~solid layer~~ external surface comprises a solid layer of metal configured to be placed against the target area of skin.

70. (new) A system for treating acne, comprising:
a power supply;
a main device body comprising a handpiece;

a confining cap replaceably positioned on a first end of the main device body, wherein the confining cap comprises an intermediate material with a rapid electrical heater embedded therein, the intermediate material comprising a layer of rigid material, the intermediate material comprising an external surface configured to be placed against human skin, the intermediate material further comprising an internal surface configured to receive energy from the rapid electrical heater, wherein the intermediate material permits thermal energy to be transferred from the internal surface to the external surface in less than 0.5 seconds.

71. (new) The device of claim 70, wherein the confining cap comprises a thermally conductive material thermally insulating material.

72. (new) The device of claim 70, wherein the rapid electrical heater provides less than 5 watts of energy.

73. (new) The device of claim 70, wherein the confining cap is configured to be snapped on to the main device body.

74. (new) The device of claim 71, wherein the intermediate material comprises a metal layer defining the external surface.

75. (new) The device of claim 71, wherein the intermediate material comprises a thin metal sheet.

76. (new) The device of claim 71, wherein the confining cap comprises a region of thermally conductive material surrounded by insulator material.

77. (new) The device of claim 76, wherein the region of thermally conductive material is a generally circular area.

78. (new) A method of treating acne, comprising:

positioning a device, wherein the device comprises a handpiece having an intermediate material at one end thereof, wherein the intermediate material comprises a layer of rigid material, wherein the intermediate material comprises an outside surface, and wherein positioning the device comprises positioning the intermediate material outside surface in contact with a target area of skin;

providing electrical power to an energy source, wherein the energy source comprises a rapid heater embedded within the intermediate material;

converting the electrical power into thermal energy via the energy source;

transmitting the thermal energy from the energy source, through the intermediate material, to the intermediate material outside surface, and to the target area of skin, wherein the thermal energy is transmitted in an amount sufficient to rapidly heat and expand pores within the target area of skin contacted by the intermediate material outside surface.

79. (new) The method of claim 78, wherein transmitting the thermal energy comprises transmitting thermal energy through the intermediate material in less than 0.5 seconds.

80. (new) The method of claim 78, wherein converting the electrical power into thermal energy comprises outputting less than 5 watts of energy from the rapid heater.

81. (new) The method of claim 78, wherein the intermediate material is embedded within a cap configured to be attached to and removed from the handpiece, the method further comprising:

attaching the cap to the handpiece, wherein attaching the cap to the handpiece occurs prior to positioning the device with the intermediate material outside surface in contact with the target area of skin.

82. (new) The method of claim 81, wherein the intermediate material further comprising:
removing the cap from the handpiece; and
placing a new cap on the handpiece.

83. (new) The method of claim 78, wherein the device comprises an energy removal component configured to remove thermal energy from the intermediate material, wherein the method further comprises:

removing thermal energy from the intermediate material, wherein removing thermal energy comprises activating the energy removal component.

84. (new) The method of claim 83, further comprising:

determining the temperature of the target area of skin;

wherein activation of the energy removal component is performed responsive to the determination of the temperature of the target area of skin.

85. (new) The method of claim 78, wherein the target area of skin is exposed only to the thermal energy transmitted through the intermediate material, and is not exposed to any photons or other forms of energy generated by the device.